

**Feature**

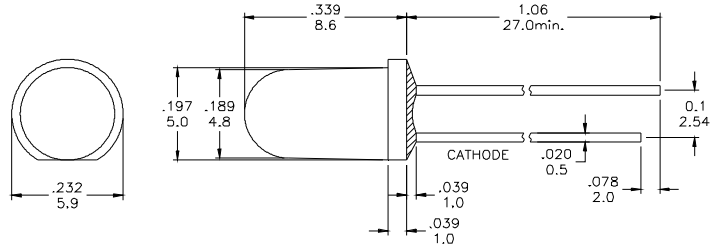
- § Low Power Consumption
- § High Intensity
- § I.C. compatible

**Applications**

- § Commercial Outdoor Sign Board
- § Front Panel Indicator
- § Dot-Matrix Module
- § LED Bulb
- § Traffic Light / Sign

**Description**

- § These High Intensity LEDs are Based on AlGaInP/GaP Material Technology
- § Water Transparent Lens

**Package Dimension**


\*Tolerance :  $\pm \frac{0.01}{0.25}$  Unit :  $\pm \frac{\text{inch}}{\text{mm}}$

**Absolute Maximum Ratings at Ta = 25°C**

Symbol	Parameter	Max.	Unit
PD	Power Dissipation	120	mW
VR	Reverse Voltage	5	V
IAF	Average Forward Current	20	mA
IPF	Peak Forward Current (Duty=0.1 · 1kHz)	100	mA
—	Derating Linear Form 25°C	0.4	mA / °C
Topr	Operating Temperature Range	- 40 to + 80	°C
Tstg	Storage Temperature Range	- 40 to + 100	°C

Lead Soldering Temperature [1.6mm (0.063inch) From Body] 260°C For 5 Seconds.

**Electrical / Optical Characteristics and Curves at Ta = 25°C**

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
VF	Forward Voltage	IF = 20 mA		2.1	2.6	V
IR	Reverse Current	VR = 5 V			100	μA
$\Delta \theta$	Half Intensity Angle	IF = 20 mA		25	30	Deg.
IV	Luminous Intensity	IF = 20 mA	2500	4500		mcd.
$\lambda p$	Peak Wavelength	IF = 20 mA		593		nm
$\lambda d$	Dominant Wavelength	IF = 20 mA		590		nm



**Electrical Characteristics at Ta=25°C**

Symbol	I <sub>v</sub>		V <sub>F</sub>		λ D	
Parameter	Luminous Intensity		Forward Voltage		Dominant Wavelength	
Condition	IF=20mA		IF=20mA		IF=20mA	
Unit	mcd		V		nm	
Binning	Grade	Range	Grade	Range	Grade	Range
	Bin19	2500~3500	E	2.1~2.2	Y4	589~591
	Bin20	3500~4900	F	2.2~2.3	Y5	591~593
	Bin21	4900~6900	G	2.3~2.4	Y6	593~595
			H	2.4~2.5		
			I	2.5~2.6		

Intensity: Tolerance of minimum and maximum = ± 15%

Vf: Tolerance of minimum and maximum = ± 0.05v

NOTE:

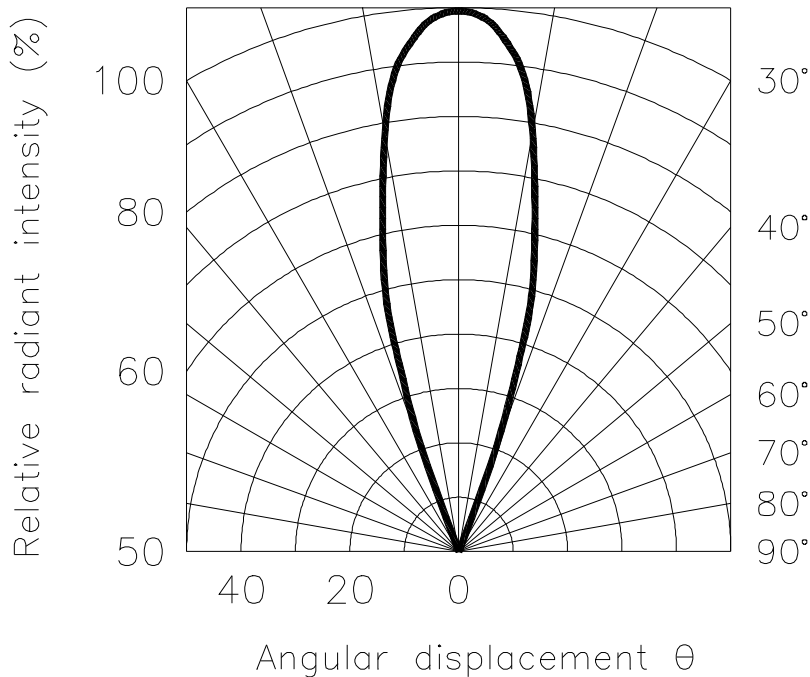
1. Static electricity and surge damages the LED. It is recommend to use a anti-static wrist band or anti-electrostatic glove when handing the LEDs. All devices, equipment and machinery must be properly grounded.

**Radiation Diagram**

**IF=20 mA    50% Power Angle    Angle =25°**

Radiation Diagram

0    10°    20°





**Typical Electro-optical Characteristic Curves  
(25°C Free Air Temperature Unless Otherwise Specified)**

Fig 1. Forward Current vs. Forward Voltage

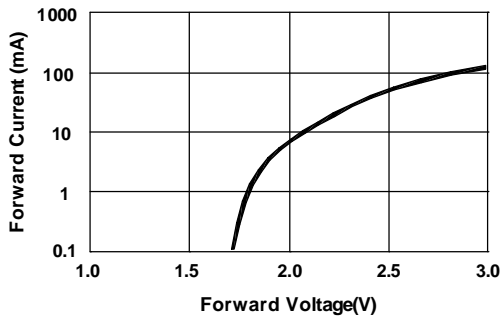


Fig 2. Relative Intensity vs. Forward Current

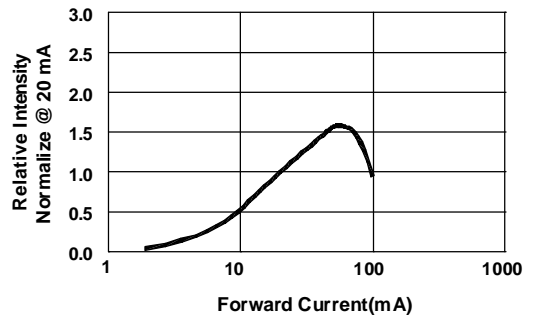


Fig 3. Forward Voltage vs. Temperature

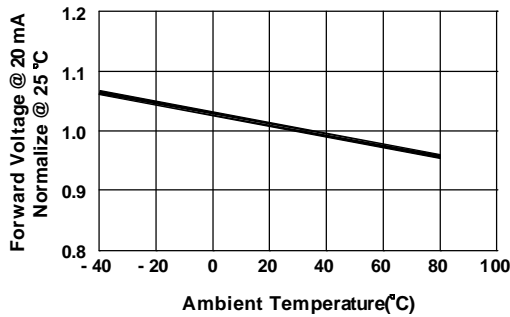


Fig 4. Relative Intensity vs. Temperature

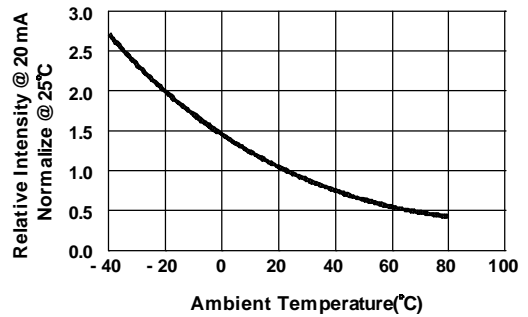


Fig 5. Relative Intensity vs. Wavelength

